

JOHN ASHCROFT
Governor

G. TRACY MEHAN III
Director



STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MEMORANDUM

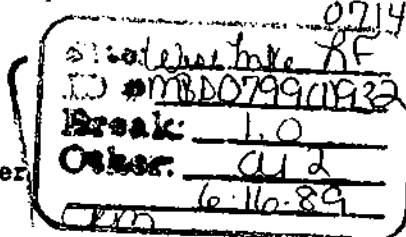
Division of Energy
Division of Environmental Quality
Division of Geology and Land Survey
Division of Management Services
Division of Parks, Recreation,
and Historic Preservation

DATE: June 16, 1989

TO: Mr. Miles H. Stotts, Chief
Solid Waste Enforcement Unit, WMP

FROM: Ms. Janese Neher, Environmental Engineer
Solid Waste Enforcement Unit, WMP

SUBJECT: Westlake Landfill, St. Louis County



I have reviewed the Hydrogeologic Investigation West Lake Landfill Primary Phase Report by Burns and McDonnell Consulting Engineers dated October 27, 1986. It was requested by the consultants that a review of this report be conducted by MDNR and a meeting held by January 1987 to develop timely implementation of the recommended short-term and long-term monitoring outlined in the report. A problem does exist with the amount of time that has elapsed between now, June 1989, and when the data was collected. It is highly probable the data collected in 1985 and 1986 may not be representative of the current conditions in 1989 in the field. Therefore, the review comments have been made as if the material presented in the report was recently compiled.

It was difficult to review the report without recreating the wheel. Geologic data could have been presented in geologic sections. This would have facilitated review and made easier verification of statements regarding the subsurface. Computer-generated models of the ground surface elevations should have been used to display groundwater contour lines.

Geology and Hydrology

In the conclusions and recommendations, a statement was made in 1(a) that the underlying bedrock is relatively impermeable both on the valley side slopes and the bedrock on the valley floor buried beneath the alluvium. The possibility exists that the limestone bedrock may or may not be impermeable. The bedrock beneath the site should be cored and logged to verify the statement.

In the conclusions and recommendations a statement in 1(b), it was stated that a rise in the river stage during seasons of high rainfall and snow melt causes the water table in the aquifer to rise. It was impossible to determine the effect of high rainfall or snow melt on the collected data, since no precipitation data was provided in the report. The data provided was water level measurements of the river stages and water well measurements. It was impossible to determine the amount of precipitation and the effects of infiltration due to rainfall on the site. It is suggested that further studies be conducted and seasonal measurements of the river stages, groundwater levels and precipitation data be taken.

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SUPERFUND RECORDS

DNR 0292

Section 1(i) stated that piezometers I-50 and D-91 are in an area south of the landfill and are outside the area of influence of the groundwater flow patterns of the site. Only two water level readings were taken at D-90 and D-91 during December and May, while other piezometers had readings on an average of 14 times during 1984-1985. With the complexity of the site and the hydraulic connection to the river, more data needs to be ascertained to determine if I-50 and D-91 are outside the area of influence. The consultant also stated D-89 and D-90 are not reliable as upgradient water quality indicators. It is puzzling why the consultant uses these upgradient wells in comparing the sample analysis with the downgradient well system. It is objectionable to use these wells as an upgradient comparison. It is recommended that a new upgradient and background well cluster be established monitoring the shallow, intermediate and deep interval depths at the site. A possible location could be located northeast of I-73.

In section 1(j) it was stated that piezometers S-51, S-52, and S-53 are downgradient of the recharge area, but the groundwater from where these wells are installed does not pass beneath the landfill. The report recommends these wells be considered as background. It also stated in the report that the groundwater flow direction may be temporarily reversed. Therefore, these wells would not be background wells all of the time. A good upgradient location could be established and used as background to eliminate many of the problems at S-51, S-52 and S-53.

A map should be submitted showing the areas of buried solid waste at the site, permitted and unpermitted. The submittal should also include a report that addresses the contaminated groundwater from the recharge area. A dye trace might be considered in locating the areas of recharge.

Groundwater Quality Conclusions

To properly evaluate the sample data submitted during sampling round 1 and round 2, water level measurements, river elevations, and monthly precipitation data should have been taken. It is impossible without this data to conclude why round 1 sampling was significantly higher than round 2. There are many possible scenarios that could be hypothesized, but without data it is all sheer speculation. The results from round 1 and round 2 should be thrown out and four new sampling rounds should be conducted for all the wells tested during round 1 and round 2. There are unexplainable discrepancies in the data during these sampling rounds and three years have elapsed since the sampling data has been collected and analyzed making the results useless. New sampling rounds should be conducted to establish four seasonal variations. One laboratory should be contracted to collect the samples and analyze the results. During round 1 and round 2 sampling efforts, different laboratories were contracted to analyze the data. This could significantly distort any consistency between sampling rounds. All samples should be sampled according to the Waste Management Program's Technical Bulletin "Collection and Analysis of Water Samples".

MEMO TO--Mr. Miles H. Stotts
June 16, 1989
Page 3

It is recommended before sampling is begun that a new upgradient monitoring well nest be established. It is also recommended that the original background wells, the original upgradient well, and three surface sample points at the drainage ditch, one upgradient, one downgradient and one along the landfill site, be included in the sample collection. The short-term investigation needs to be completed before any long-term monitoring program is proposed or established. The long-term monitoring proposed in the report is irrelevant until the short-term monitoring produces reliable results.

Radionuclide analysis should be conducted for the four sampling rounds. One possibility that might be considered in one sample round is testing for radon gas. More than four wells should be sampled for radiation and more shallow wells should be included in the sampling for radioactivity. Shallow wells could be located in the vicinity of D-83, D-92, and D-94. Installation of these wells should be considered in the monitoring program.

Only the radiation sample results for round 2 were submitted in the report even though sample round 1 was collected and analyzed. These results should be submitted to the WMP. A determination was made by the consultant that the results were uncertain due to suspended solids in the sample. These results and the laboratory's comments on the samples are a vital part of this report and should be submitted.

As the consultant stated, there exists a possible source of contamination in the recharge area near the upgradient monitoring well location. A proposal should be submitted detailing the proposed steps in investigating the location of the possible contaminant source. The surface pond located downgradient and to the west of the landfill should also be investigated. The consultant should submit to the WMP a proposal to sample the pond including the proposed sample parameters. The proposal should also address the sample analysis of the fish in the pond including the number of fish that will be sampled, the kind of fish, the chemicals analyzed for, and the statistical procedures that will be run on the analysis.

JN:tr

JOHN ASHCROFT
Governor

G. TRACY MEHAN III
Director



STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

P.O. Box 176
Jefferson City, MO 65102

West Lake
Superior
Division of Energy
Division of Environmental Quality
Division of Geology and Land Survey
Division of Management Services
Division of Parks, Recreation,
and Historic Preservation

May 16, 1989

Mr. Clay R. Brahm
Graham Equipment Co.
700 Hanley Industrial Court
St. Louis, MO 63144

Dear Mr. Brahm:

RE: Special Waste Disposal, West Lake Sanitary Landfill, Operating Permit #118912.

This is in response to the special waste disposal request received by the Waste Management Program (WMP) May 1, 1989 regarding the disposal of gasoline contaminated soil from a tank removal. The disposal request has been approved per the enclosed letter.

Approval to dispose of this waste at West Lake Sanitary Landfill is contingent upon it not being a hazardous waste per 10 CSR 25-4.261. WMP's review of this disposal request did not extend beyond a review of data submitted by Graham Equipment Co. for Tayloe Glass Co. This data indicates that this waste is not a hazardous waste as per 10 CSR 25-4.261. Ultimate responsibility, though, of identifying a waste as hazardous resides with the waste generator.

This approval is not to be construed as compliance with any existing local requirements. For disposal of special waste in St. Louis County, please contact the St. Louis County Department of Community Health and Medical Care, Environmental Health Div., 121 South Meramec (7th Floor), Clayton, Missouri 63105, (314) 854-6249.

If there are questions concerning this, I may be contacted at (314) 751-3176. Also, if a copy of 10 CSR 25-4.261 is needed, please contact the Waste Management Program at (314) 751-3176.

Sincerely,

DIVISION OF ENVIRONMENTAL QUALITY

Lesa A. Jenkins
Lesa A. Jenkins
Environmental Engineer
Waste Management Program

LAJ:lch

Enclosure

cc: Mr. Leon Colfin, St. Louis County Dept. Community Health and Medical Care
St. Louis Regional Office

JOHN ASHCROFT
Governor

G. TRACY MEHAN III
Director



STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

P.O. Box 176
Jefferson City, MO 65102

Division of Energy
Division of Environmental Quality
Division of Geology and Land Survey
Division of Management Services
Division of Parks, Recreation,
and Historic Preservation

May 16, 1989

Mr. Mike Whitlock
Laidlaw Waste Systems
13570 St. Charles Rock Road
Bridgeton, MD 63044

Dear Mr. Whitlock:

RE: Special Waste Disposal, West Lake Sanitary Landfill, Operating Permit #118912

This is in reply to your request received May 1, 1989 to dispose of a special waste generated by Tayloe Glass Co. The waste is described as gasoline contaminated soil from a tank removal. The generation rate was estimated at a one time disposal of approximately one hundred fifty (150) cubic yards.

West Lake Sanitary Landfill is approved to accept this waste. The department's review of your special waste disposal request did not investigate this waste's potential for being a regulated hazardous waste beyond that of a review of the data submitted by Graham Equipment Co. for Tayloe Glass Co. The data reviewed indicates that this waste is not regulated as a hazardous waste per 10 CSR 25-4.261. The approved method of disposal is codisposal with municipal wastes on the active fill face. The contaminated soil should be spread out at the site to allow volatilization to occur before incorporating into the landfill. The soil should not be used for cover material.

This approval is not to be construed as compliance with any existing local disposal requirements. If there are questions, I may be contacted at (314) 751-3176.

Sincerely,

DIVISION OF ENVIRONMENTAL QUALITY

Lesa A. Jenkins

Lesa A. Jenkins
Environmental Engineer
Waste Management Program

LAJ:ich

cc: Mr. Clay Brahm, Graham Equipment co.
St. Louis Regional Office



ABLE INDUSTRIES, inc.
7141 NO MAPLE • ST. LOUIS MO 63120

DAN DISMANG
PUBLIC RELATIONS-SALES

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TRAFFIC CONTROL CONSULTANTS

7151 N. Market Street, St. Louis, MO 63133

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PORTABLE TOILETS

April 27, 1989

RECEIVED
MAY 01 1989

Missouri Department of Natural Resources
Waste Management Program
P.O. Box 176
Jefferson City, MO 65102

WASTE MANAGEMENT
PROGRAM

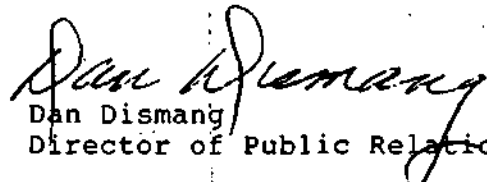
Gentlemen:

Enclosed you will find a Special Waste Disposal Request and Special Waste Acceptance Application, under the name of Tayloe Glass Co.

When processed, please forward your results to the undersigned contract hauler.

Thanking you in advance.

Sincerley,


Dan Dismang
Director of Public Relations

DD/rmf

"The bitterness of poor quality remains . . . long after the sweetness of low price is forgotten."



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WASTE MANAGEMENT PROGRAM
SPECIAL WASTE DISPOSAL REQUEST

RECEIVED
MAY 01 1989

SECTION I GENERAL INFORMATION (TO BE COMPLETED BY THE GENERATOR AND LANDFILL OPERATOR)	
DISPOSAL FACILITY	WASTE GENERATOR
NAME Laidlaw - West Lake Landfill	Taylor Glass Co. c/o Graham Equipment Co. (Contractor)
ADDRESS 13570 St. Charles Rock Road	9119 Olive Street 700 Hanley Ind. Ct.
CITY, STATE, ZIP CODE Maryland Heights, Mo. 63043	Olivette, Mo. 63132 St. Louis, Mo. 63144
TELEPHONE NUMBER (314) 739-1122	(314) 997-7799 (314) 644-2030
PERMIT NO. W8912	N/A
CONTACT PERSON Dispatcher	Gary Maives Clay R. Brahm

SECTION II WASTE CHARACTERIZATION (TO BE COMPLETED BY THE GENERATOR)	
A. NAME OF WASTE Gasoline contaminated clay soil over-burden from tank removal.	
B. DESCRIPTION OF GENERATION PROCESS Accumulated spillage of gasoline from overflow upon delivery - soil removed upon tank closure. Tank is not leaking.	
C (CHECK ONE) closure. Tank is not leaking - (1) <input checked="" type="checkbox"/> SOLID (2) <input type="checkbox"/> SLUDGE (20% OR GREATER SOLIDS) (3) <input type="checkbox"/> SLURRY (20% OR LESS SOLIDS) (4) <input type="checkbox"/> LIQUID (5% OR LESS SOLIDS) (5) <input type="checkbox"/> OTHER - SPECIFY _____	
(INDICATE) % SOLIDS BY WEIGHT _____ MILD SPECIFIC GRAVITY _____ PUMPABLE: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO; ODOR: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO; FREE FLUID: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO; PH _____ FLASHPOINT _____	
D. WAS THE WASTE EVER CLASSIFIED OR LISTED HAZARDOUS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, SPECIFY THE EPA WASTE NUMBER _____	
E. LIST BELOW THE CHEMICAL COMPOSITION (ATTACH ANY ADDITIONAL ANALYSIS)	
MAJOR COMPONENTS	% BY WEIGHT
1. Hydrocarbon - gasoline	
2. _____	
3. _____	
4. _____	
F. SOURCE OF CHEMICAL DATA	

SECTION III GENERATION RATE/DISPOSAL FREQUENCY* (TO BE COMPLETED BY GENERATOR)	
A. AVERAGE GENERATION RATE (CUBIC YARDS PER WEEK, POUNDS PER MONTH, ETC.) _____	
B. DISPOSAL REQUEST [COMPLETE (1) OR (2)]: (1) <input type="checkbox"/> Continual (or intermittent) If disposal is to be made on a continual or intermittent basis, indicate the quantity and frequency of disposal _____ (cubic yards per week, pounds per month, etc.) Indicate the quantity available for immediate disposal, if applicable _____ (2) <input checked="" type="checkbox"/> One - time only If one - time only, indicate the total amount to be disposed of 130-150 cu yards	

*NOTE ► INDICATE APPROPRIATE UNITS (TONS, GALLONS, POUNDS, CUBIC YARDS, ETC.)

SECTION IV TRANSPORTATION (TO BE COMPLETED BY GENERATOR OR LANDFILL OPERATOR)	
A. CONTAINERS USED FOR TRANSPORTATION (CHECK ONE) (1) <input checked="" type="checkbox"/> BULK (130-150 CU. YD.); (2) <input type="checkbox"/> METAL DRUMS (_____ GAL.); (3) <input type="checkbox"/> CASES, CARTONS (SIZE _____); (4) <input type="checkbox"/> FIBER DRUMS (_____ GALS.); (5) OTHER - SPECIFY Approximately 10 yards per container - 15 total	
B. TYPE OF VEHICLE (1) <input type="checkbox"/> TRACTOR-TRAILER; (2) <input checked="" type="checkbox"/> ROLL-OFF/LUGGER; (3) <input type="checkbox"/> DUMP TRUCK; (4) <input type="checkbox"/> (OTHER) _____	

SECTION V DISPOSAL TECHNIQUES (TO BE COMPLETED BY THE LANDFILL OPERATOR)**A. ☐ SEPARATE TRENCH BURIAL**

(1) LOCATION ON LANDFILL SITE _____

(2) TRENCH DESIGN PREVIOUSLY APPROVED BY DNR? ☐ YES ☐ NO IF NOT, ATTACH REQUEST FOR APPROVAL**B. ☐ CO-DISPOSAL WITH MUNICIPAL WASTE ON ACTIVE FILL FACE**

1 AVERAGE DAILY QUANTITY OF MUNICIPAL SOLID WASTE _____ (SPECIFY TONS OR CUBIC YARDS)

2 SPECIAL WASTE TO BE UNLOADED AT: _____ TOE OF WORKING FACE

_____ TOP OF WORKING FACE

C. ☐ OTHER DISPOSAL PROCEDURES - SPECIFY _____**SECTION VI HANDLING PROCEDURES (TO BE COMPLETED BY GENERATOR)**

Safety precautions during handling: Provide handling information supplied by product manufacturer, waste generator, or from other sources, describing the necessary measures that should be taken to protect personal safety, to control dusting, or to ensure fixed placement of waste. This should include a description of materials not compatible with this waste.

Waste is gasoline contaminated soil. Packaged in fifteen (15) lined and covered

roll off steel containers - approximately 10 yards each per container

SECTION VII CERTIFICATION (TO BE COMPLETED BY GENERATOR AND LANDFILL OPERATOR)

I, the undersigned, submit this request to dispose of the named waste and certify that the information supplied by me herein is correct. I understand approval to dispose of the waste may be suspended if false information has been submitted or if the disposal operation is not performed in a proper and legal manner.

SIGNATURE OF LANDFILL OPERATOR OR AUTHORIZED REPRESENTATIVE

PRINT NAME/TITLE

Clay R. Brahm, - Graham Equipment Co. (Contractor)

DATE

April 24, 1989

I, the undersigned, submit this request to dispose of the named waste and certify that the waste named herein, to the best of my knowledge, is not a hazardous waste as defined by the Missouri Waste Management Law and Rules, and that the information supplied by me is correct.

SIGNATURE OF WASTE GENERATOR OR AUTHORIZED REPRESENTATIVE

PRINT NAME/TITLE

DATE

ADDITIONAL COMMENTS

MAIL THE COMPLETED FORM TO:

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WASTE MANAGEMENT PROGRAM
P.O. BOX 176
JEFFERSON CITY, MISSOURI 65102